

What is claimed is:

1. A method to elicit an immune response to an antigen in a felid, said method comprising parenterally administering to said felid a composition comprising a nucleic acid molecule complexed with a cationic lipid, wherein said nucleic acid molecule encodes said antigen.
2. A method to deliver a nucleic acid molecule to a felid, said method comprising parenterally administering a composition comprising said nucleic acid molecule complexed with a cationic lipid.
3. A method to protect a felid from rabies infection, said method comprising parenterally administering to said felid a composition comprising a nucleic acid molecule encoding rabies glycoprotein G, wherein said nucleic acid molecule is complexed with a cationic lipid.
4. The method of Claim 2, wherein said nucleic acid molecule encodes a compound selected from the group consisting of an RNA molecule and a protein.
5. The method of Claim 2, wherein said nucleic acid molecule encodes a protein that elicits an immune response in said felid.
6. The method of Claim 5, wherein said protein is selected from the group consisting of an antigen and an immunomodulator.
7. The method of Claim 1 or 5, wherein said immune response comprises an antibody response.
8. The method of Claim 1 or 5, wherein said immune response comprises a cell-mediated response.
9. The method of Claim 1 or 5, wherein said immune response protects said felid from disease.
10. The method of Claim 1 or 6, wherein said antigen is selected from the group consisting of a protozoan parasite antigen, a helminth parasite antigen, an ectoparasite antigen, a fungal antigen, a bacterial antigen, and a viral antigen.
11. The method of Claim 1 or 6, wherein said antigen is selected from the group consisting of a calicivirus antigen, a coronavirus antigen, a herpesvirus antigen, an immunodeficiency virus antigen, an infectious peritonitis virus antigen, a leukemia virus antigen, a parvovirus antigen, a rabies virus antigen, a *Bartonella* antigen, a *Yersinia*

antigen, a *Dirofilaria* antigen, a *Toxoplasma* antigen, a flea antigen, a flea allergen, a midge antigen, a midge allergen, a mite antigen, a mite allergen, and a tumor antigen.

12. The method of Claim 1 or 6, wherein said antigen comprises rabies glycoprotein G antigen.

5 13. The method of Claim 1, 2, or 3, wherein said cationic lipid comprises a tetramethyltetraalkyl spermine analog lipid.

14. The method of Claim 1 or 3, wherein said composition further encodes an immunomodulator.

10 15. The method of Claim 1, 2, or 3, wherein said felid is selected from the group consisting of domestic cats, wild cats, and zoo cats.

16. The method of Claim 1, 2, or 3, wherein the felid is selected from the group consisting of domestic cats, lions, tigers, leopards, panthers, cougars, bobcats, lynx, bobcats, lynx, jaguars, cheetahs, and servals.

17. The method of Claim 1, 2, or 3, wherein the felid is a domestic cat.

15 18. The method of Claim 1, 3, or 5, wherein a single administration of said composition elicits an immune response.

19. The method of Claim 1, 3, or 6, wherein said step of administering enhances an immune response compared to administration of a naked DNA vaccine encoding said antigen of Claim 1 or 6 or said rabies glycoprotein G of Claim 3 to a felid.

20 20. The method of Claim 1, 2, or 3, wherein said step of administering is selected from the group of intramuscular administration, intravenous administration, subcutaneous administration, intradermal administration, and intraperitoneal administration.

25 21. The method of Claim 1, 2, or 3, wherein said step of administering effects about 75% seroconversion in a population of felids administered said nucleic acid molecule.

22. The method of Claim 1, 2, or 3, wherein said step of administering effects about 100% seroconversion in a population of felids administered said nucleic acid molecule.

Sub C'

-36-

23. The method of Claim 1, 2, or 3, wherein said nucleic acid molecule:lipid ratio is from about 1:10 to about 10:1.

24. The method of Claim 1, 2, or 3, wherein said nucleic acid molecule is administered in a dose of from about 75 micrograms to about 1,000 micrograms.

5 25. The method of Claim 1, 2 or 3, wherein said nucleic acid molecule is administered in a dose of not more than about 75 micrograms.

26. The method of Claim 1, 2, or 3, wherein said composition is dehydrated and subsequently rehydrated prior to administration.

10 27. The method of Claim 1, 2, or 3, wherein said composition further comprises an excipient.

Sub C1